

AMENDMENTS TO THE CLAIMS

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

Listing of Claims:

1. (Currently Amended) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 4, further ~~A method for recognizing a pattern of an alignment mark on a wafer, the method comprising:~~
~~positioning the wafer on an adjustable wafer stage in a measurement apparatus;~~
~~capturing images of a key alignment mark by magnifying an alignment mark region of the wafer;~~
~~deleting a subset of the captured image data that corresponds to from a portion of the first alignment mark region that surrounds where the alignment mark pattern does not exist between the captured images; and~~
~~extracting an alignment mark pattern by a pattern recognition of the remaining image data after the deletion of the image data.~~

2. (Currently Amended) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 1, further comprising:
recognizing a related alignment mark pattern in a second alignment mark region of the wafer at a first magnification, the second alignment mark region including the first alignment mark region and at least one related alignment mark disposed outside the first alignment mark region;
wherein the captured image data corresponding to the first alignment mark region are captured at the key alignment mark is magnified by at least about four or more magnifications times the first magnification.

3. (Cancelled).
4. (Currently Amended) A method for recognizing a pattern of an alignment mark on a wafer, the method comprising:
 - providing the wafer into a measurement apparatus;
 - capturing image data corresponding to a first identifying a key alignment mark in an
 - alignment mark region of the wafer;
 - determining a shape of an alignment mark within capturing an image by magnifying
 - only the identified key the first alignment mark region;
 - extracting an alignment mark pattern by a pattern recognition of the captured image
 - data; and
 - establishing the extracted alignment mark pattern as a reference mark,
 - wherein the pattern recognition is performed on a subset of the captured image data
 - corresponding to the shape of the alignment mark.
5. (Currently Amended) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 1, wherein the image data ~~images~~ are captured by the measurement apparatus that includes a controlling member.
6. (Cancelled)
7. (Previously Presented) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 5, wherein the controlling member controls a driving member to adjust alignment of the wafer in accordance with the pattern recognition.

8. (Currently Amended) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 1, wherein the image data images are captured with a CCD sensor.

9. (Previously Presented) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 8, wherein the CCD sensor transforms incident light with a photoelectric conversion method into two-dimensional gray level image data.

10. (Currently Amended) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 1, wherein:

the first alignment mark region is a box region that includes the key alignment mark,
and

the deleted subset of image data includes data corresponding to two or more
discontinuous portions of the box region.

11. (Currently Amended) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 1, wherein:

the key alignment mark has a window frame shape that encloses one or more non-
mark regions, and

the deleted subset of image data includes data corresponding to the one or more non-
mark regions.

12. (Currently Amended) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 1, wherein the ~~key~~ alignment mark has a ~~square shape with a cross shape inside, and~~

the deleted subset of image data corresponds to a continuous region that encloses the cross shape.

13-18. (Cancelled).

19. (Currently Amended) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 4, wherein the subset of the captured image data corresponds to ~~key alignment mark~~ has a window frame shape.

20. (Currently Amended) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 4, wherein the subset of the captured image data corresponds to ~~key alignment mark~~ has a ~~square shape with a cross shape inside.~~

21. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 2, wherein data corresponding to the at least one related alignment mark is not used in the pattern recognition.

22. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 12, wherein the continuous region has a continuous outer perimeter having a first shape and a continuous inner perimeter having a second shape, wherein the second shape is different from the first shape.